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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/723,718 11/28/00 GOLD

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EXAMINER

ZITOMER, S

ART UNIT

PAPER NUMBER

1655

DATE MAILED:

06/06/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/723,718

Applicant(s)
GOLD et al.

Examiner
Stephanie Zitomer

Art Unit
1655



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on Jan 22, 2001.

2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 11 and 12 is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 11 and 12 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

19) ☐ Notice of Informal Patent Application (PTO-152)

17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 2

20) ☐ Other:

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DETAILED ACTION

Rejection under 35 U.S.C. 112, first paragraph: Lack of written description

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 11 and 12 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims are drawn to nucleic ligands able to crosslink a target molecule comprising one or more photoreactive groups (claim 11) selected from a group of recited photoreactive groups (claim 12). The specification describes nucleic acids comprising photoreactive groups in SELEX candidate mixtures and nucleic acid ligands comprising photoreactive groups. However, the disclosure is silent with regard to target molecules comprising photoreactive groups. In addition to enablement the first paragraph of 112 requires a "written description". As set forth by the Court in *Vas-Cath Inc. v. Mahurkar*, 19 USPQ2d 1111, the written description must convey to one of skill in the art "with reasonable clarity" that as of the filing date applicant was in possession of the claimed invention. In view of the absence of a written description of a target molecule comprising one or more photoreactive groups, applicant clearly has not shown possession of the claimed invention at the time the application was filed.

Rejections under 35 U.S.C. 112, second paragraph: Indefiniteness

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 11 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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(a) The claims are confusing due to confusing syntax in claim 11. It is unclear whether the "one or more photoreactive groups" are attached to or simply in the vicinity of the nucleic acid ligands or are attached to or in the vicinity of the target molecule. It is suggested to clarify the relationship of the photoreactive groups with the nucleic acid ligands and/or with the target molecule and the nature of the attachment, e.g., covalent, ionic, noncovalent.

Rejection under 35 U.S.C. 102(b): Anticipation

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by the patent to Gold et al. (5,705,337 issued Jan. 6, 1998). The patent discloses the claimed invention nucleic acid ligands able to crosslink a target molecule comprising one or more photoreactive groups at column 24, lines 26-29 wherein the photoreactive group is 5-iodouracil (column 23, lines 24-28).

Double patenting obviousness type rejections

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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4. Claims 11 and 12 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 4 of U.S. Patent No. 5,705,337. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patent claim is drawn to a method in which nucleic acid ligands that bind covalently with a target molecule are identified wherein the candidate mixture nucleic acids in the method comprise photoreactive groups. It would have been obvious to the skilled practitioner in the art to provide the nucleic acid ligand identified by the recited method wherein such nucleic acid ligand comprises a photoreactive group which was known in the art to be able to crosslink a target molecule and where photoreactive groups including 5-bromouracil and 5-iodouracil were known in the art. The skilled practitioner in the art would have been motivated by the known utility of nucleic acids in detection and purification of target molecules among other known benefits.

5. Claims 11 and 12 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7 and 15 of U.S. Patent No. 6,001,577. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patent claims are drawn to a method in which nucleic acid ligands that bind covalently with a target molecule are identified wherein the candidate mixture nucleic acids in the method comprise photoreactive groups. It would have been obvious to the skilled practitioner in the art to provide the nucleic acid ligand identified by the recited method wherein such nucleic acid ligand comprises a photoreactive group which was known in the art to be able to crosslink a target molecule and wherein photoreactive groups including 5-bromouracil and 5-iodouracil were known in the art. The skilled practitioner in the art would have been motivated by the known utility of nucleic acids in detection and purification of target molecules among other known benefits.

6. Claims 11 and 12 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 5 of U.S. Patent No. 5,998,142. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patent claim is drawn to a nucleic acid ligand which binds covalently with a protein (target molecule) wherein the nucleic acid ligand comprises a chemically reactive

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functional unit defined in the patent as including photoreactive groups (column 10, lines 25-27) which include 5-iodouracil (column 29, Example 4).

7. Claims 11 and 12 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 3 of U.S. Patent No. 5,962,219. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patent claim is drawn to a method in which nucleic acid ligands that bind covalently with a target molecule are identified wherein the candidate mixture nucleic acids in the method comprise photoreactive groups. It would have been obvious to the skilled practitioner in the art to provide the nucleic acid ligand identified by the recited method wherein such nucleic acid ligand comprises a photoreactive group which was known in the art to be able to crosslink a target molecule and where photoreactive groups including 5-bromouracil and 5-iodouracil were known in the art. The skilled practitioner in the art would have been motivated by the known utility of nucleic acids in detection and purification of target molecules among other known benefits.

8. Claims 11 and 12 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 15 and 16 of U.S. Patent No. 5,763,177. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patent claims are drawn to a nucleic acid ligand that photocrosslinks to a protein (target molecule) identified by a SELEX method wherein the candidate mixture nucleic acids comprise a photoreactive group selected from a group comprising the photoreactive groups recited in claim 12.

Conclusion

10. **No claim is allowed.**

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephanie Zitomer whose telephone number is (703) 308-3985. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, W. Gary Jones, can be reached on (703) 308-1152. The official fax phone number for this Group is (703) 308-4242. The unofficial fax number is (703) 308-8724.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.



Stephanie Zitomer, Ph.D.

June 4, 2001

